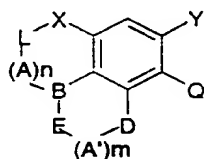


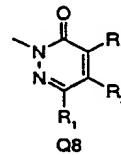
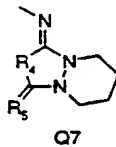
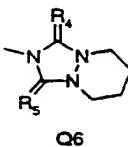
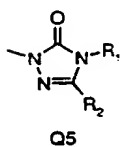
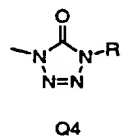
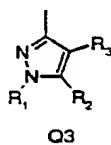
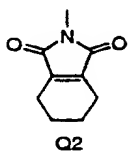
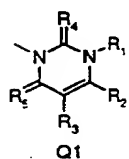
1-73	250	30	65	0	55	90	50	40	50	0	0	0	0	60	75	0
1-74	250	60	55	0	0	65	55	10	65	0	0	0	0	0	0	0
1-75	250	0	90	0	80	80	45	20	0	0	0	0	0	55	40	0
1-76	250	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1-77	250	25	50	0	75	90	0	50	0	0	0	0	0	10	35	0
1-78	250	60	0	0	75	99	70	80	0	0	0	0	0	10	60	50
1-79	250	70	75	0	60	65	80	0	65	25	0	0	0	0	0	0

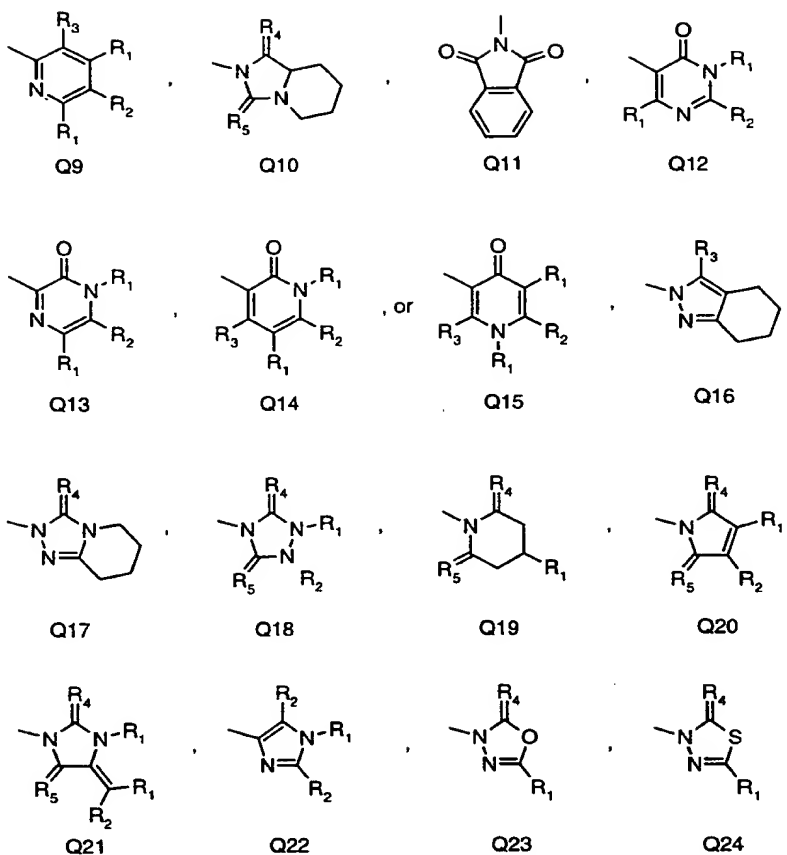
What is claimed is:

1. A compound represented by the formula (I) or its salt:



wherein Q is a heterocycle selected from the group consisting of Q1 to Q24:





wherein R_1 is hydrogen, alkyl, haloalkyl, alkenyl, alkynyl, amino, alkoxyalkyl, acetyl, alkoxycarbonylamino, alkylcarbonylamino or alkoxycarbonyl;

R_2 is alkyl, haloalkyl, alkoxy, haloalkoxy or unsubstituted or substituted phenyl;

R_3 is hydrogen, halogen, nitro, amino, alkylamino, haloalkylamino, cyano or amide;

R_4 and R_5 are independently oxygen, sulfur or imino;

Q6, Q7, Q10, Q16 or Q17 may be unsaturated containing one or two double bonds in the 6-membered ring;

Y is hydrogen or halogen;

-L-X- is -O-, -S-, -S(O)-, -S(O)₂-, -CR₆R₇-, -CR₆R₇-O-, -O-CR₆R₇-, -CR₆R₇-S-, -S-CR₆R₇-, -CR₆R₇-S(O)-, -S(O)-CR₆R₇-, -CR₆R₇-S(O)₂-, -S(O)₂-CR₆R₇-, -CR₆R₇-CR₆R₇-, -CR₆=CR₇-, -NR₆-, -CR₆=N-, -N=CR₆-, -N=N-, -CR₆R₇-NR₆- or -NR₆-CR₆R₇-;

A is -O-, -S-, -S(O)-, S(O)₂-, -NH-, -C(O)-, -C(S)-, -C(NH)- or -CR₆R₇-;

A' is -O-, -S-, -S(O)-, S(O)₂-, -NH-, -C(O)-, -C(S)-, -C(NH)- or -CR₁₀R₁₁-;

n is an integer of 0 to 2;

m is an integer of 0 to 2;

B is N, CH, C, or N⁺

E is a bond, -O-, -S-, -S(O)-, -S(O)₂-, -NH-, -C(O)-, -C(S)-, -C(NH)-, -CR₁₂R₁₃-, -CR₁₂R₁₃-CR₁₂R₁₃-, -CR₁₂=CR₁₃-, =CR₁₂- or -NR₁₂-;

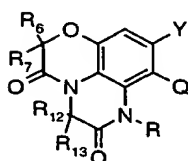
D is -NR-, -N=CR₁₄-, -O-, -S-, -S(O)-, -S(O)₂-, -CR₁₄R₁₅- or -CR₁₄=CR₁₅-;

R₆, R₇, R₈, R₉, R₁₀, R₁₁, R₁₂, R₁₃, R₁₄ and R₁₅ are independently hydrogen, halogen, hydroxy, cyano, nitro, amino, alkyl, alkenyl, alkynyl, cycloalkyl, phenyl, benzyl, aryl, heteroaryl, alkoxy, haloalkoxy, aryloxy, heteroaryloxy, alkylcarbonyl, arylcarbonyl, alkoxycarbonyl, aryloxycarbonyl, aminocarbonylamino, alkylaminocarbonylamino, arylaminocarbonylamino, alkoxyalkyl, alkylthioalkyl, alkoxycarbonylalkyl, cycloalkoxycarbonylalkyl, alkylcarbonyloxyalkyl, alkylcarbonylaminoalkyl, alkoxyalkylcarbonylalkyl, heterocycloalkyl, alkylsulfonyl, arylsulfonyl, alkenylcarbonyl, alkynylcarbonyl, cycloalkylcarbonyl, heteroarylcarbonyl, alkylthiocarbonyl, cycloalkyloxycarbonyl, arylthio-carbonyl, aryl-thiocarbonyl, heteroaryloxycarbonyl, aminocarbonyl, alkylaminocarbonyl, arylaminocarbonyl, heteroarylaminocarbonyl, alkoxycarbonylcarbonyl or arylcarbonylcarbonyl where any of these groups may be substituted with at least one substituent selected from the group consisting of halogen, cyano, nitro, amino, dialkylamino, hydroxyl, carboxyl, alkyl, alkenyl, alkynyl, cycloalkyl, alkylcarbonyl, alkylcarbonyloxy, alkoxy, alkoxycarbonyl, alkylthio, alkylthiocarbonyl, alkoxythiocarbonyl, alkylaminocarbonyl, arylaminocarbonyl, alkylsulfonyl, alkenyloxycarbonyl, alkynyloxycarbonyl, aryl, arylcarbonyl, aryloxy, aryloxycarbonyl, arylthio, heteroaryl, heteroaryloxycarbonyl and methylenedioxy, wherein the alkyl moiety or aryl moiety may be substituted with at least one substituent selected from the group consisting of halogen, cyano, nitro, alkyl, alkoxy, haloalkyl, haloalkoxy, alkoxycarbonyl, cycloalkyl, aryl and heterocycloalkyl;

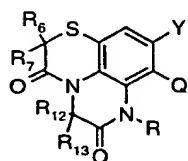
R is hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkylalkyl, alkoxyalkyl, alkoxyalkoxyalkyl, alkylcarbonyl, arylcarbonyl, alkoxycarbonyl, aryloxycarbonyl, alkoxycarbonylalkyl, alkoxyalkoxycarbonylalkyl, cycloalkoxycarbonylalkyl, aralkyl, heteroaralkyl, aryloxyalkyl or heteroaryloxyalkyl where any of these groups may be substituted with at least one substituent selected from the group consisting of halogen, cyano, nitro, amino, carboxyl, alkylthioalkyl, hydroxyalkyl, CON(R₁₆)R₁₇ and COON(R₁₆)R₁₇;

R_{16} and R_{17} are independently hydrogen, halogen, alkyl, alkenyl, alkynyl, cycloalkyl, alkoxyalkyl, alkylthioalkyl, alkoxyalkyl, cycloalkoxyalkyl, alkylcarbonyloxyalkyl, alkylcarbonylaminoalkyl, alkoxyalkylcarbonylalkyl, phenyl or benzyl where any of these groups may be substituted with at least one substituent selected from the group consisting of halogen, cyano, carboxyl, hydroxy, nitro and amino.

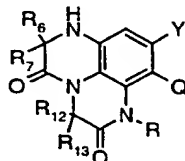
2. The compound according to claim 1, wherein the formula (I) is



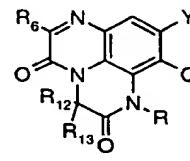
I-1



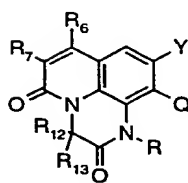
I-2



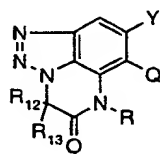
I-3



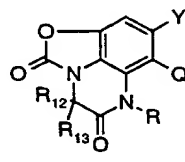
I-4



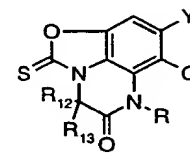
I-5



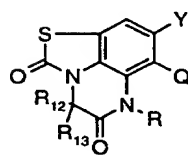
I-6



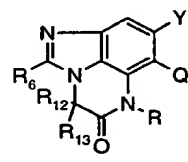
I-7



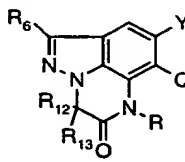
I-8



I-9



I-10



I-11

Wherein Q, R, R_6 , R_7 , R_{12} , R_{13} and Y are the same as defined in claim 1.

3. The compound according to claim 1, wherein Q is Q1-5, Q16 or Q17.
4. The compound according to claim 1, wherein Y is fluorine.
5. The compound according to claim 1, wherein the formula (I) is (I-1)



I-1

Wherein Q is Q1 or Q3; Y is fluorine; and R, R₆, R₇, R₁₂ and R₁₃ are the same as defined in claim 1.

6. The compound of claim 5, wherein the compound is 8-[1-Methyl-6-(trifluoromethyl)-2,4-(1H, 3H)-pyrimidinedione-3-yl]-9-fluoro-5H-pyrazino[1,2,3-de]-1,4-benzoxazine-3,6-(2H, 7H)-dione (1-1), 8-[4-Chloro-1-methyl-5-(trifluoromethyl)-1H-pyrazol-3-yl]-9-fluoro-5H-pyrazino[1,2,3-de]-1,4-benzoxazine-3,6(2H, 7H)-dione (1-13), 8-[4-Chloro-5-(difluoromethoxy)-1-methyl-1H-pyrazole-3-yl]-9-fluoro-5H-pyrazino[1,2,3-de]-1,4-benzoxazine-3,6(2H, 7H)-dione (1-25), 9-Fluoro-8-(4,5,6,7-tetrahydro-2H-isoindole-1,3-dione-2-yl)-5H-pyrazino[1,2,3-de]-1,4-benzoxazine-3,6(2H, 7H)-dione (1-37), 8-[4-Chloro-1-methyl-5-(trifluoromethyl)-1H-pyrazol-3-yl]-9-fluoro-2-R-methyl-5H-pyrazino[1,2,3-de]-1,4-benzoxazine-3,6(2H, 7H)-dione (1-48), 8-[4-Chloro-1-methyl-5-(trifluoromethyl)-1H-pyrazol-3-yl]-2,2-dimethyl-9-fluoro-5H-pyrazino[1,2,3-de]-1,4-benzoxazine-3,6(2H, 7H)-dione (1-52) and 8-[4-Chloro-5-(difluoromethoxy)-1-methyl-1H-pyrazole-3-yl]-9-fluoro-2-R-methyl-5H-pyrazino[1,2,3-de]-1,4-benzoxazine-3,6(2H, 7H)-dione (1-55).

7. A herbicidal composition, characterized in that it contains at least one compound according to claim 1 and an agricultural adjuvant.

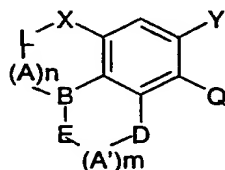
8. A method for controlling undesired vegetation which comprises applying to a locus to be protected a herbicidally effective amount of a compound of claim 1.

9. The method of claim 8 wherein the locus to be protected is a cereal crop field.

10. The method of claim 8 wherein the compound of claim 1 is applied to soil as a preemergent herbicide.

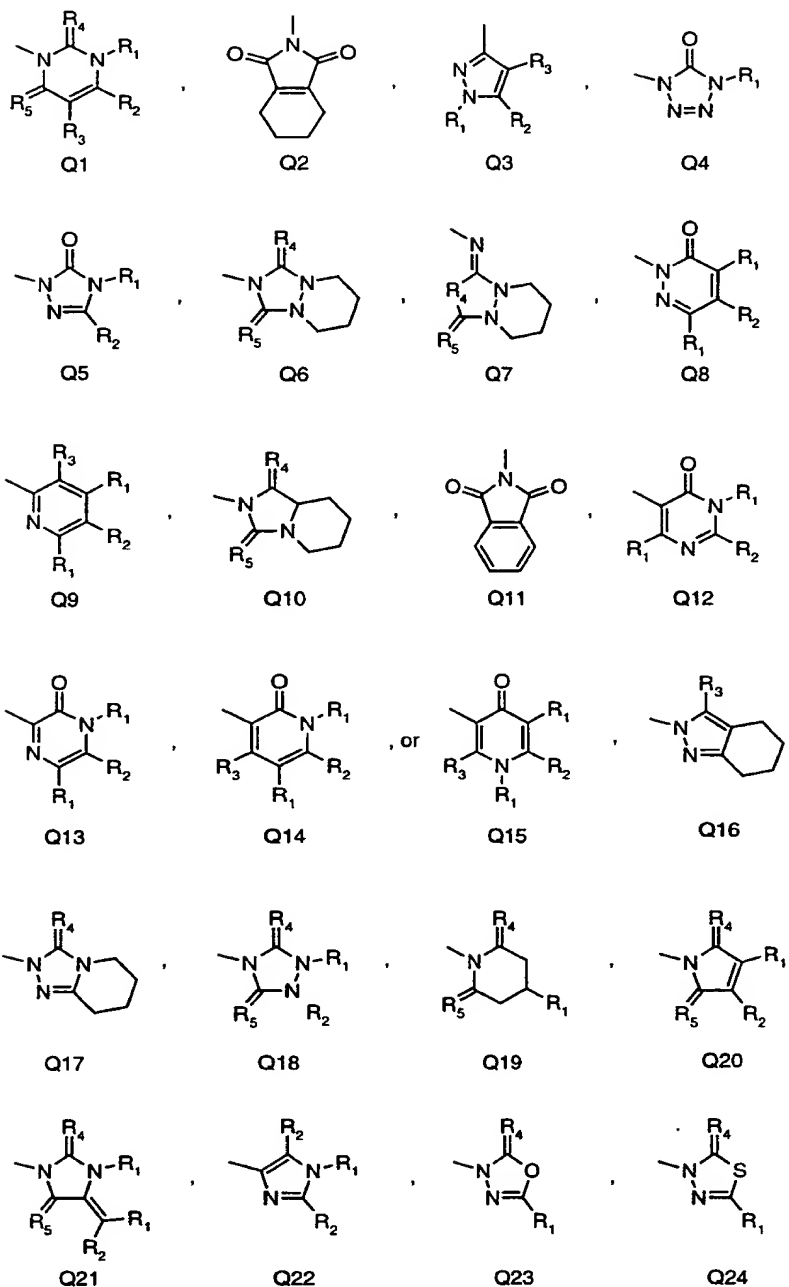
11. The method of claim 8 wherein the compound of claim 1 is applied to plant foliage.

12. A process for preparing a compound represented by the formula (I') or its salt:



I

wherein Q is a heterocycle selected from the group consisting of Q1 to Q24:



wherein R₁ is hydrogen, alkyl, haloalkyl, alkenyl, alkynyl, amino, alkoxyalkyl, acetyl, alkoxycarbonylamino, alkylcarbonylamino or alkoxycarbonyl;

R₂ is alkyl, haloalkyl, alkoxy, haloalkoxy or unsubstituted or substituted phenyl;

R₃ is hydrogen, halogen, nitro, amino, alkylamino, haloalkylamino, cyano or amide;

R₄ and R₅ are independently oxygen, sulfur or imino;

Q6, Q7, Q10, Q16 or Q17 may be unsaturated containing one or two double bonds in the 6-membered ring;

Y is hydrogen or halogen;

-L-X- is -O-, -S-, -S(O)-, -S(O)₂-, -CR₆R₇-, -CR₆R₇-O-, -O-CR₆R₇-, -CR₆R₇-S-, -S-CR₆R₇-, -CR₆R₇-S(O)-, -S(O)-CR₆R₇-, -CR₆R₇-S(O)₂-, -S(O)₂-CR₆R₇-, -CR₆R₇-CR₆R₇-, -CR₆=CR₇-, -NR₆-, -CR₆=N-, -N=CR₆-, -N=N-, -CR₆R₇-NR₆- or -NR₆-CR₆R₇-;

A is -O-, -S-, -S(O)-, S(O)₂-, -NH-, -C(O)-, -C(S)-, -C(NH)- or -CR₆R₇-;

A' is -O-, -S-, -S(O)-, S(O)₂-, -NH-, -C(O)-, -C(S)-, -C(NH)- or -CR₁₀R₁₁-;

n is an integer of 0 to 2;

m is an integer of 0 to 2;

B is N, CH, C, or N⁺

E is a bond, -O-, -S-, -S(O)-, -S(O)₂-, -NH-, -C(O)-, -C(S)-, -C(NH)-, -CR₁₂R₁₃-, -CR₁₂R₁₃-CR₁₂R₁₃-, -CR₁₂=CR₁₃-, =CR₁₂- or -NR₁₂-;

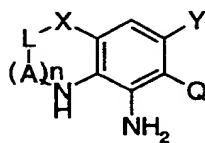
D is -NR-, -N=CR₁₄-, -O-, -S-, -S(O)-, -S(O)₂-, -CR₁₄R₁₅- or -CR₁₄=CR₁₅-;

R₆, R₇, R₈, R₉, R₁₀, R₁₁, R₁₂, R₁₃, R₁₄ and R₁₅ are independently hydrogen, halogen, hydroxy, cyano, nitro, amino, alkyl, alkenyl, alkynyl, cycloalkyl, phenyl, benzyl, aryl, heteroaryl, alkoxy, haloalkoxy, aryloxy, heteroaryloxy, alkylcarbonyl, arylcarbonyl, alkoxycarbonyl, aryloxycarbonyl, aminocarbonylamino, alkylaminocarbonylamino, arylaminocarbonylamino, alkoxyalkyl, alkylthioalkyl, alkoxycarbonylalkyl, cycloalkoxycarbonylalkyl, alkylcarbonyloxyalkyl, alkylcarbonylaminoalkyl, alkoxyalkylcarbonylalkyl, heterocycloalkyl, alkylsulfonyl, arylsulfonyl, alkenylcarbonyl, alkynylcarbonyl, cycloalkylcarbonyl, heteroarylcarbonyl, alkylthiocarbonyl, cycloalkyloxycarbonyl, arylthio-carbonyl, aryl-thiocarbonyl, heteroaryloxycarbonyl, aminocarbonyl, alkylaminocarbonyl, arylaminocarbonyl, heteroarylaminocarbonyl, alkoxycarbonylcarbonyl or arylcarbonylcarbonyl where any of these groups may be substituted with at least one substituent selected from the group consisting of halogen, cyano, nitro, amino, dialkylamino, hydroxyl, carboxyl, alkyl, alkenyl, alkynyl, cycloalkyl, alkylcarbonyl, alkylcarbonyloxy, alkoxy, alkoxycarbonyl, alkylthio, alkylthiocarbonyl, alkoxythiocarbonyl, alkylaminocarbonyl, arylaminocarbonyl, alkylsulfonyl, alkenyloxycarbonyl, alkynyloxycarbonyl, aryl, arylcarbonyl, aryloxy,

aryloxycarbonyl, arylthio, heteroaryl, heteroaryloxycarbonyl and methylenedioxy, wherein the alkyl moiety or aryl moiety may be substituted with at least one substituent selected from the group consisting of halogen, cyano, nitro, alkyl, alkoxy, haloalkyl, haloalkoxy, alkoxycarbonyl, cycloalkyl, aryl and heterocycloalkyl;

R is hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkylalkyl, alkoxyalkyl, alkoxyalkoxyalkyl, alkylcarbonyl, arylcarbonyl, alkoxycarbonyl, aryloxycarbonyl, alkoxycarbonylalkyl, alkoxyalkoxycarbonylalkyl, cycloalkoxycarbonylalkyl, aralkyl, heteroaralkyl, aryloxyalkyl or heteroaryloxyalkyl where any of these groups may be substituted with at least one substituent selected from the group consisting of halogen, cyano, nitro, amino, carboxyl, alkylthioalkyl, hydroxyalkyl, $\text{CON}(\text{R}_{16})\text{R}_{17}$ and $\text{COON}(\text{R}_{16})\text{R}_{17}$;

R_{16} and R_{17} are independently hydrogen, halogen, alkyl, alkenyl, alkynyl, cycloalkyl, alkoxyalkyl, alkylthioalkyl, alkoxycarbonylalkyl, cycloalkoxycarbonylalkyl, alkylcarbonyloxyalkyl, alkylcarbonylaminoalkyl, alkoxyalkylcarbonylalkyl, phenyl or benzyl where any of these groups may be substituted with at least one substituent selected from the group consisting of halogen, cyano, carboxyl, hydroxy, nitro and amino which comprises of reacting a compound represented by the formula (II):



II

with a compound selected from the group consisting of an appropriately substituted alkyl halide, alkyl acid halide, aryl acid halide, alkyl acid anhydride, aryl acid anhydride, alkylhaloformate, alkyl isocyanate, aryl isocyanate, alkyl dihalide, aliphatic aldehyde, aliphatic ketone, aromatic aldehyde, and aromatic ketone followed by cyclization.